

# Verifying Trigonometric Identities

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Guidelines for  
Verifying Trig  
Identities

1. work with ONE side only
2. use algebraic technique  
(factor, add fractions, monomial denominators)
3. substitute using basic identities
4. convert everything to sin & cos
5. TRY SOMETHING!!

Example 1:

Verify  $\frac{\csc^2 x}{\cot x} = \csc x \sec x$

**Example 2:**

Verify  $\frac{\tan \theta}{1 + \sec \theta} + \frac{1 + \sec \theta}{\tan \theta} = 2 \csc \theta$

**Example 3:**

Verify  $\frac{\cot^3 t}{\csc t} = \cos t (\csc^2 t - 1)$